

REMARKS

By the present paper, claims 3-5, 9-11, and 16 are cancelled without prejudice or disclaimer of subject matter therein, and claims 6, 7, 12, 13, 14, and 17 are amended. Claims 6-8, and 12-17 are in the Application.

The specification is amended to address objections thereto.

Entry of the claims amendments and reconsideration of the Application are respectfully requested.

Amendments to the Specification:

The specification is amended to delete references to claim numbers in the written description.

Amendments to the Claims:

Claim 17 is amended to incorporate the limitations from dependent claims 3, 4, and 5 and to point-out with even greater particularity that Applicants' inventive flocculant includes a gelation suppressant that includes at least one of acetic acid, ammonium chloride, or ammonium acetate. Support for the amendments can be found, for example, in the claims as filed and in the specification at page 7, lines 1 - 8.

Claim 8 is similarly amended.

Claims 6, 7, 12, 13, and 14 are amended to correct their dependencies required by cancellation of other claims.

Applicants respectfully submit that the claims amendments do not introduce new matter into the Application.

Claim Rejections Under 35 U.S.C. § 112:

Claim 17 was rejected as indefinite because, it is alleged, excessive experimentation would be required to determine the meets and bounds of the claims. Applicants respectfully submit that the amendments to claim 17 cure any such defect that may have existed.

Claim 11 was rejected as allegedly indefinite. Cancellation of claim 11 renders the rejection moot.

Claim 13 was rejected as indefinite because, it is alleged, there is no antecedent basis for the element “pH adjustment means”. Applicants respectfully traverse.

Dependent claim 13 recites positively the elements “a pH adjustment means” and further characterizes this element by its effect. Claim 13 can be readily construed without prior recitation of “pH adjustment means” in a superordinate claim.

Claim 16 was rejected as allegedly indefinite. Cancellation of claim 16 renders the rejection moot.

Claim Rejections Under 35 U.S.C. § 103:

Claim 17 was rejected as allegedly obvious in view of Oliver Jean Christian Poncelet, United States Patent 5,888,711 (Poncelet et al.). Applicants respectfully traverse.

Applicants describe in their specification that colloidal silicic flocculant then known in the art had disadvantages relating to their unavoidable tendency towards gelatinization because of the instability of the colloidal state. Accordingly, the flocculants of the day had to be formulated at or very near the time of use and could not be stored for long periods of time.

The only partial solution to the problem then known was to maintain the colloid at very low pH ($\text{pH} \ll 2$). *See, e.g.*, United States Patent 4,923,629. But this partial solution made the resulting composition much more dangerous to handle.

Applicants were the first to surprisingly discover that, when added to or included in acidic fluid used to make the flocculant, acetic acid, ammonium acetate, and ammonium chloride inhibit the vexatious premature gelatinization. Dilution with water at the point-of-use suppresses the inhibitory effect, allowing for rapid gelation when desired.

Poncelet et al. neither teaches nor suggests that acetic acid, ammonium acetate, and ammonium chloride might be advantageously employed to inhibit gelatinization of silicic flocculants at less-dangerous pH.

For the foregoing reasons, Applicants respectfully submit that the rejection of claim 17 is improper and should be withdrawn.

Claims 17, 3-7, 15, and 16 were rejected as allegedly obvious over Poncelet et al. in view of Yasuhiro et al., JP2001-104711 (Yasuhiro et al.) and further in view of Takao Hasegawa et al., United States Patent 4,923,629 (Hasegawa et al.). Applicants respectfully traverse.

Cancellation of claim 3-5 and 16 renders the rejection of these claims moot.

The patentability of Applicants' inventive flocculant, defined by claim 17 and claims depending therefrom, does not rest on any particular combination of silicon-containing substance and alkaline substance. The fact that ammonium hydroxide was a known source of hydroxide in making the silicic component of a silicate-base flocculant is not a teaching or suggestion that, once formed, gelation

of a silicic colloid could be inhibited ammonium acetate (a much weaker base than ammonium hydroxide) or by ammonium chloride (a Lewis acid).

For the foregoing reasons, Applicants respectfully submit that the rejection of claim 17 and all claims depending therefrom is improper and should be withdrawn.

Claims 8 - 13 were rejected as allegedly obvious over Poncelet et al. in view of Yasuhiro et al. For at least the reasons set-out above in their traversal of the rejection of claim 17 as obvious over Poncelet et al., Applicants respectfully submit that the rejections are improper and should be withdrawn.


Conclusion:

Based on the forgoing amendments and remarks, Applicants respectfully submit that the claims are now in condition for allowance, which allowance is earnestly solicited. If, in the opinion of the Examiner, a telephone conference would advance prosecution of the application, the Examiner is invited to telephone the undersigned attorneys.

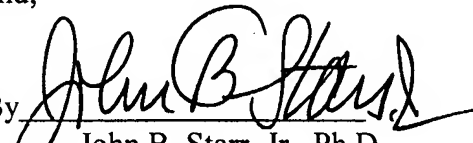
Applicants respectfully submit that no fee is due with this paper. If in fact a fee is due, the Commissioner is hereby authorized to debit Deposit Account No. 10-1250.

Respectfully submitted,

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